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October 12, 2005

2005-332-E

VIA: Hand Delivery
Charles L.A. Terreni, Esquire
Chief Clerk and Administrator
Public Service Commission of South Carolina,
101 Executive Center Dr., Suite 100
Columbia, SC 29210

RE: Petition of Duke Power, a division of Duke Energy Corporation, for a Declaratory Order

Dear Mr. Terreni,

Enclosed please find the original and ten copies of Duke Energy Corporation's Petition, as described hereinabove.

The Office of Regulatory Staff is being served on even date. Please let us know if you have any questions or concerns.

With kind regards, we are

Sincerely,

William F. Austin
Richard L. Whitt

RLW/dss

Cc: Florence Belser, Esquire

BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2005-337-E

IN RE:	PETITION OF DUKE POWER, A DIVISION OF DUKE ENERGY CORPORATION, FOR A DECLARATORY ORDER	))))	PETITION

INTRODUCTION

Duke Power, a division of Duke Energy Corporation ("Duke" or the "Company"), hereby petitions the Public Service Commission of South Carolina ("Commission") for a Declaratory Order finding that Duke's planned replacement of certain of the combustion turbines located in Duke's steam-electric-generating plant located on the Saluda River in Anderson County, South Carolina, known as the Lee Steam Station ("Lee Steam Station") does not require this Commission to issue a Certificate of Environmental Compatibility and Public Convenience and Necessity ("Certificate"), because the replacement of the turbines does not constitute the construction of a major utility facility, in that the replacement of the existing turbines constitutes a replacement of an existing facility with a like facility. Because the transaction described is a replacement of a like facility, no hearing and no notice is required, pursuant to §58-33-110 (1) of the S.C. Code Ann. (1976, as amended). As a courtesy, Duke is providing notice to entities normally noticed pursuant to the Statute.

THE PETITIONER/JURISDICTION

This Petition is made pursuant to §58-33-110, §58-33-120, §58-33-130, and §58-33-140 of the S.C. Code Ann. (1976, as amended) and other applicable rules and regulations. In support of this Petition, the Company shows the Commission the following:

1. Its general offices are at 422 South Church Street, Charlotte, North Carolina, and its mailing address is:

   Duke Power
   422 South Church Street, PBO5E
   Charlotte, North Carolina 28202

2. The name and address of Petitioner's attorneys are:

Lara Simmons Nichols
Associate General Counsel
Duke Power, a division of Duke Energy Corporation
P.O. Box 1244, PBO5E
Charlotte, North Carolina 28201-1244
(704) 382-9960

William F. Austin
Richard L. Whitt
Austin, Lewis & Rogers, P.A.
508 Hampton Street
Columbia, South Carolina 29201
(803) 251-7443

3. Copies of all pleadings, orders or correspondence in this proceeding should be served upon the attorneys listed above.

4. The Company is a public utility engaged in the generation, transmission, distribution, and sale of electric energy in the central portion of North Carolina and the western portion of South Carolina, and is subject to the jurisdiction of this Commission.

PETITION FOR DECLARATORY ORDER

5. Petitioner constructed two of the three Combustion Turbine Units at the Lee Steam Station prior to the implementation date of the cited statutes, and the third Combustion Turbine Unit was constructed later with a 30 MW nominal face plate capacity and Petitioner has continuously owned and operated the facility since the installation of the initial two Combustion Turbine Units.

6. The Lee Steam Station operation, as presently configured, contains six units, three Coal-Fired Units and three Combustion Turbine Units. This Petition concerns the replacement of only the three (3) nominally rated 30 MW Westinghouse Combustion Turbine Units, designated as units 4C, 5C, and 6C. ("the existing

turbines") The existing turbines provide secondary back-up emergency electric power to Oconee Nuclear Station. ("Oconee") The Nuclear Regulatory Commission Operating License for Oconee has been extended to the year 2034 and the Lee Steam Station will continue to fill this critical back-up role to the Oconee Nuclear Station with the replacement of the existing turbines.

7. Two of the three existing Combustion Turbine Units have been in service at the Lee Steam Station for nearly forty years, and the third Combustion Turbine Unit has been in service for almost thirty years. Given the age of the existing turbines, it is difficult and expensive to maintain an adequate inventory of replacement parts.

8. The replacement turbines consist of two (2), General Electric simple cycle turbines nominally rated at 41 MW, to be fired with pipeline-quality natural gas or low Sulfur fuel oil ("the replacement turbines").

9. Duke has applied for and received a construction permit for the construction of the replacement turbines from the Office of Environment Quality Control, Bureau of Air Quality of the South Carolina Department of Health and Environmental Control. The permit number is 0200-0004-CC, issued on September 8, 2005 pursuant to applicable South Carolina Codes of Law. ("the air quality permit") ("See air quality permit attached as Exhibit 'A', hereto").

COMPLIANCE WITH §58-33-110.

10. The replacement turbines, when installed, will have a nominal rating of 41MW for a total of 82 MW. The three existing turbines being replaced are rated at a nominal rating of 30 MW for a total of 90 MW of present capacity. Therefore, the nominal MW rating of the replacement turbines is essentially equivalent to the nominal MW rating of the existing turbines. Accordingly, this transaction equates to the replacement of the Lee Steam Station Units 4C, 5C, and 6C with a like facility in full compliance with §58-33-110 of the S.C. Code Ann. (1976, as amended), and thus a new Certificate of Environmental Compatibility and Public Convenience and Necessity is not required, nor is a hearing or notice required.

COMPLIANCE WITH §58-33-130

11. As explained hereinabove, the installation of the replacement turbines (the proposed change in the facility) does not require a Certificate, nor does the replacement require an amendment of a Certificate, therefore a Commission hearing is not required. Even if the proposed replacement required an amendment of an existing Certificate, the replacement of the existing turbines would not result in a significant increase in any environmental impact of the Lee Steam Station and a Commission hearing would still not be required. ("See air quality permit attached as Exhibit 'A', hereto")

COMPLIANCE WITH §58-33-130

12. Also as explained hereinabove, the installation of the replacement turbines (the proposed change in the facility) does not require a Certificate, nor does the replacement require an amendment of a Certificate, therefore a Commission hearing is not required. Even if the proposed replacement required an amendment of an existing Certificate, the installation of the replacement turbines (the proposed change in the facility) would not result in a substantial change in the location of all or portion of the Lee Steam Station. In fact, the proposed change in the facility will not result in any change in the location, or "footprint" of the Lee Steam Station and a Commission hearing would still not be required.

NOTICE.

13. Although notice is not required, Duke is, as a courtesy, providing a copy of this filing to entities who would have normally received notice pursuant to the Statute.

CONCLUSION

Duke Power requests that this Commission: (i) inquire into the relief sought in this Petition; (ii) review the Pleading and Exhibit provided by the Company; and find that the Company has complied with, or compliance is not required, by §58-33-110, §58-33-120, §58-33-130, and §58-33-140 of the S.C. Code Ann. (1976, as amended) because of the

facts set forth in the Petition; (**iii**) determine that the replacement of the existing turbines is the replacement of an existing facility with a like facility; (**iv**) find that a hearing is not required by §58-33-130 because of the facts set forth in the Petition; (**v**) conclude that the Declaratory Order requested by Petitioner should be issued; (**vi**) order such other and further relief as this Commission deems just and reasonable.

WHEREFORE, Petitioner prays that pursuant to §58-33-110, §58-33-120, §58-33-130 and §58-33-140 of the S.C. Code Ann. (1976, as amended) and other applicable rules and regulations, that this Commission enter a Declaratory Order as requested hereinabove.

This the 12th day of October, 2005.

Lara Simmons Nichols
Associate General Counsel
P.O. Box 1244, PBO5E
Charlotte, North Carolina 28201-1244
(704) 382-8142

William F. Austin
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Attorneys for Petitioner Duke Power

Columbia, South Carolina

Exhibit A
Page 1

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
BUREAU OF AIR QUALITY
SYNTHETIC MINOR, NSPS (40CFR60) CONSTRUCTION PERMIT

Duke Energy Corporation (Lee Steam Station)
S-4-178
Pelzer, SC 29669

Permission is hereby granted to construct two (2) nominally rated 41 MW General Electric LM6000 simple cycle turbines (CT7 and CT8) to be fired on pipeline-quality natural gas or low sulfur (0.05%) fuel oil. The turbines shall be equipped with Combustion Modification and additionally water injection when burning fuel oil as designed for electric dispatch. The turbines are subject to New Source Performance Standards (NSPS) Subparts A and GG. These turbines are also subject to South Carolina Regulation 61-62.1, Section II(H) Synthetic Minor Plant Permits by limiting annual PM_{10}, SO_2, NO_X, and CO emissions below significance levels for PSD applicability. Three existing turbines (CT4, CT5, and CT6) will be removed from service and will not be operated after the new turbines are in operation. Two exempt emergency generators (750 KW each, to be equipped with hour meters) and two 250 gallon fuel oil tanks are also being installed with this project.

NOTWITHSTANDING ANY OF THE CONDITIONS LISTED BELOW, NO APPLICABLE LAW, REGULATION, OR STANDARD MAY BE VIOLATED.

CONDITIONS

1. All official correspondence, plans, permit application forms, and written statements are an integral part of this permit.

2. **THE DIRECTOR OF THE ENGINEERING SERVICES DIVISION MUST BE NOTIFIED IN WRITING OF THE DATE CONSTRUCTION BEGAN POSTMARKED NO LATER THAN 30 DAYS AFTER SUCH DATE, AND THE ACTUAL DATE OF STARTUP POSTMARKED WITHIN 15 DAYS AFTER SUCH DATE OF EACH PERMITTED FACILITY.**

3. This construction permit shall expire one year from date issued. This permit may be extended one year upon approval by the Bureau following the written request from the permittee. This request must be made prior to the permit expiration.

4. An expired construction permit may be reactivated within one year of the expiration only upon approval by the Bureau following the written request of the permittee. This request shall address all laws, regulations, and standards applicable at the time of request for reactivation.

This is pursuant to the provisions of Section 48-1-110, 1976 *Codes of South Carolina*, as amended, and the *South Carolina Air Quality Control Regulation 61-62.1*, Section II and the *Code of Federal Regulations*, Title 40, Part 60, Subpart A.

PERMIT NUMBER: 0200-0004-CC
PLANT LOCATION: S-4-178 - Pelzer
DATE OF ISSUE: September 8, 2005
FACILITY SIC/NAICS CODES: 4911 / 221112

I. STANDARD CONDITIONS

A. This permit expressly incorporates all the provisions of *South Carolina Department of Health and Environmental Control Regulation 61-62.1*, Section II, Paragraph C and the *Code of Federal Regulations*, Title 40, Part 60, Subpart A.

II. SPECIAL CONDITIONS

A. EMISSION LIMITATIONS

Air pollutant emissions shall not exceed the following:

ID	Pollutant/ Standard	Limit	Reference Method	Regulation	State Only
CC	Opacity	20%	9	SC Regulation 61-62.5, Standard 4	No
CC	NO_X	FOR DISPATCH: 25 ppm at loads ≥ 25% (gas), (Note 1) 42 ppm at loads ≥ 25% (oil), (Note 2) FOR ALTERNATE OPERATING SCENARIO (AOS) (Note 3) Meet lowest mass emission rate for dispatch use	7, 7E	SC Regulation 61-62.5, Standard 5.2	No
CC	NO_X	(0.0075 * 14.4 / Y) + F percent by volume at 15% O2 dry basis, or 116.8 ppm at 15% O_2 dry basis (gas) 115.4 ppm at 15% O_2 dry basis (oil)	7, 7E	40 CFR 60 Subpart GG	No
CC	Annual Capacity Factor	10.3% Annual Capacity Factor (surrogate limit to maintain PM_{10}, SO_2, NO_X, and CO below PSD significance levels), or alternate demonstration	N/A	SC Regulation 61-62.1, Section II(H)	No
CC	Low Load Operation	1480 Hours/year (Note 3)	N/A	SC Regulation 61-62.1, Section II(A)	No

N/A = Not Applicable

Note 1: as reference, 25 ppm is approximately equal to 23.85 lb/hr at nominal capacity.

Note 2: as reference, 42 ppm is approximately equal to 69.22 lb/hr at nominal capacity.

Note 3: An alternate operating scenario (AOS) at low load operation for Oconee Nuclear Station backup testing and maintenance, with either unit isolated from the electric grid and not available for electric dispatch. The AOS is approved as a SC Regulation 62.5, Standard No. 5.2 alternate methodology. See Condition 8 for details.

The emission limitations listed for each emission unit are based on operation at permitted capacity. Operation at less than permitted capacity must meet emission limits specified in the applicable regulations based on that operating rate. All test methods must be the most recent revisions that are published in the *Code of Federal Regulations*, in accordance with the requirements of SC Regulation 61-62.1, Section IV, Source Test.

B. CONTINUOUS MONITORING REQUIREMENTS

ID	Pollutant	Averaging Time
CC	NO_X (when burning oil)	1 Hour (Water-To-Fuel Ratio)

C. SOURCE TEST SCHEDULE

ID	Pollutant	Frequency	Method
CC	NO_X	Initial	7, 7E

D. ADDITIONAL CONDITIONS

Condition Number	Conditions
1.	The permittee shall pay fees in accordance with SC Regulation 61-30, SC Environmental Protection Fees.
2.	In accordance with SC Regulation 61-62.1 Section II(C)(3), for all sources not required to have continuous emissions monitors, in the event of any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the local Environmental Quality Control (EQC) District office within twenty-four (24) hours after the beginning of the occurrence. The permittee shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ). The report shall contain as a minimum, the following: the identity of the emission unit and associated equipment where excess emissions occurred, the magnitude of excess emissions, the time and duration of excess emissions, the steps taken to remedy the malfunction and to prevent a recurrence, documentation that control equipment and processes were at all times maintained and operated, to the maximum extent practicable, in a manner that was consistent with good practice for minimizing emissions. Such a report shall in no way serve to excuse, otherwise justify, or in any manner affect any potential liability or enforcement action resulting from the occurrence.

Condition Number	Conditions
3.	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner/operator shall maintain this facility in compliance with the pollutant limitations in Section II(A) - Emissions Limitations, and/or as listed in Attachment A of this construction permit, whichever is more restrictive. This is a State Only enforceable requirement. Should the facility wish to increase the emission rates listed in Attachment A, it may do so by the administrative process specified in this permit condition.
4.	These conditions shall not supersede any State or Federal requirements such as National Emission Standards for Hazardous Air Pollutants, unless these conditions would impose a more restrictive limit.
5.	The owner/operator of this facility must submit a written request to obtain an operating permit to the Director of Engineering Services Division at least fifteen (15) days prior to placing this source into operation. The request should be made using the appropriate Title V modification form. This request shall also serve to meet the requirements as specified in SC Regulation 61-62.70.7.
6.	The owner/operator of this facility must submit a written request to obtain an operating permit to the Director of Engineering Services Division no later than fifteen (15) days prior to placing this source into operation. After submittal of this request the facility may operate this source in accordance with the terms and conditions contained in this permit, until such time as the Bureau of Air Quality incorporates this source into the facility's operating permit.
7.	The turbines are subject to all applicable requirements of 40CFR60, Subpart GG "Stationary Gas Turbines" and Subpart A "General Provisions."

Condition Number	Conditions
8.	The turbines are subject to SC Regulation 61-62.5, Standard No. 5.2, Control of Oxides of Nitrogen (NO_X). When burning natural gas these turbines are limited to 25 ppmv @ 15% O_2 Dry (0.054 lb/MMBtu). When burning fuel oil these turbines are limited to 42 ppmv @ 15% O_2 Dry Basis (0.16 lb/MMBtu). Water injection controls shall be operated when burning fuel oil for electric dispatch at 25% and greater loads. The NO_X limits apply when the turbines are operating in dispatch mode and must be operated above 25% load, excluding startups and shutdowns. An alternate operating scenario (AOS) for low load operation is approved as an alternate operating methodology reserved exclusively for Oconee Nuclear Station backup testing and maintenance, with either unit isolated from the electric grid and not available for electric dispatch. This methodology shall not require water injection and is not required to meet the dispatch concentration limits stated above but shall not exceed the dispatch mass emission rates (manufacturer's estimate is approximately 15 lb/hr for gas and 50 lb/hr for oil including variability allowance). Low load operation is approximately 1.5 MW when firing on natural gas and approximately 0.8 MW when firing on fuel oil. In addition, low load operation includes up to 12 hours (of 1480 hours) each year of operation at < 9.5 MW for required Oconee Nuclear Station backup load testing.
9.	The turbines are subject to SC Regulation 62.72, Acid Rain and shall comply with all applicable provisions. The facility has requested that these units be established as Low Mass Emitter sources with each turbine expected to operate below 10% annual capacity factor averaged over any 3-year period and not exceeding 20% in any single year. Should that capacity factor be exceeded, the facility shall comply with acid rain requirements for installing CEMS.
10.	The turbines are permitted to burn pipeline quality natural gas (as defined in 40CFR72.2) or low sulfur (0.05%) fuel oil as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.
11.	The facility shall record the number of hours of operation while burning #2 fuel oil. A visual inspection (qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density whether heavy or light, cause and corrective action taken for any abnormal emissions) shall be performed before completion of each 720 hours per certification (or reporting) year of operation on #2 fuel oil. No visual inspections are required when burning natural gas. A report of the results of these inspections (or a report stating that an inspection was not required due to fuel type or equipment not operating) shall be submitted to the Manager of Technical Management Section semi-annually no later than 30 days following the reporting period.

Condition Number	Conditions
12.	The turbines are limited to operating a combined annual capacity factor of 10.3% or less. This is a PSD synthetic minor limit applicable to emissions of PM_{10}, SO_2, NO_X, and CO. The turbines are further limited to operating a maximum of 1480 hours/year at low load operation to support back-up operations at Oconee Nuclear Station. The facility must record daily operating hours when operating at low loads and calculate operating hours for each year. The facility shall keep monthly records of fuel usage and operating hours and calculate capacity factor on a 12-month rolling sum basis. Should the annual capacity factor exceed 10.3%, the facility may calculate actual emissions using current emissions factors and hours associated with each mode of operation and fuel type to determine if actual emissions remain under the PSD significant increase levels. These records shall be maintained on site for a period of at least five (5) years and made available to Department personnel upon request. Semiannual reports of capacity factors or alternate calculations and low load operating hours shall be submitted to the Manager of Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.
13.	NSPS source testing for NO_X emissions from each turbine will be required prior to the issuance of a permit to operate. The testing shall be performed for both natural gas and fuel oil. The tests shall be performed within 60 days after achieving maximum production but not later than 180 days after initial start-up. The Bureau must be notified at least two weeks prior to a source test so that a Bureau representative may be present. Source test methodology must be approved by the Bureau and comply with SC DHEC Regulation 62.1, Section IV "Source Testing."
14.	Notification of intent to source test, performance of source tests, and the reporting of source test results shall comply with Section 60.8 of Subpart A "New Source Performance Standards (NSPS)" and SC Regulation 62.1, Section IV "Source Testing."
15.	Continuous Emission Monitors, alternative methods per 40 CFR Part 75 Appendix E, or excepted method per 40 CFR Part 75.19 (Low Mass Emitter) for NO_x are required in order to verify compliance with the emission limitations in Section II of this permit for each turbine. Continuous Emission Monitor (or equivalent alternate continuous monitoring, or LME monitoring) reports shall be submitted quarterly, or frequency specified in Condition 20 of this permit, to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period. These reports shall include the 24 hour rolling average (calculated using only the actual operating hours) which include valid hourly emission rates calculated for each hour in which at least two NO_X concentrations are obtained at loads over 60 percent at least 15 minutes apart, and NO_X emission rates in lb/million BTU, lb/hr, or ppm. The report shall include the following minimum information: A. All NO_x measurements for periods during which the above emission limitations for NO_x have been exceeded, together with their nature and cause. B. For periods of monitoring system malfunction: i) The date and time identifying each period during which the monitoring system was inoperative, except for zero and span checks. ii) The nature of monitoring system repairs or adjustments. iii) Proof of nitrogen oxides monitoring system performance may be required by the Department whenever repairs or adjustments have been made.

Condition Number	Conditions
16.	A. Notwithstanding the frequency of reporting requirements specified in the above condition, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met: i. For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard; ii. The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and iii. The Bureau does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (B) of this condition. B. The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Bureau in writing of his or her intention to make such a change and the Bureau does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Bureau may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Bureau to make a judgment about the source's potential for noncompliance in the future. If the Bureau disapproves the owner or operator's request to reduce the frequency of reporting, the Bureau will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Bureau to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted. C. As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the non-complying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Bureau to reduce the frequency of reporting for that standard as provided for in paragraphs (A) and (B) of this condition.
17.	The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel for at least five (5) years following the date of such measurement, maintenance, report and record.

Condition Number	Conditions
18.	In accordance with 40 CFR 60 Subpart GG, Standards of Performance for Stationary Gas Turbines, on and after the date on which the performance test required by §60.8 is completed, every owner or operator subject to the provisions of this subpart shall comply with the following. No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of: STD = 0.0075*(14.4/Y) + F where: STD = allowable ISO corrected (if required as given in 40CFR60.335(b)(1)) NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis), Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and F = NO_X emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of 40CFR60.332. For CT7 and CT8 turbines burning natural gas, STD = 117 ppm, where F = 0 (assumed), Y = 9.235 (heat rate assumed at 8,615 BTU/kW-hr with heat input of 361.4 mmBTU/hr and output of 41 mW, and 1.072 kJ/BTU). For CT7 and CT8 turbines burning fuel oil, STD = 113 ppm, where F = 0 (assumed), Y = 9.56 (heat rate assumed at 8,917 BTU/kW-hr with heat input of 365.6 mmBTU/hr and output of 41 mW, and 1.072 kJ/BTU).
19.	The owner or operator shall monitor the sulfur content and nitrogen content of the fuel being fired in each turbine as follows: Sulfur - The owner or operator shall monitor the total sulfur content of the fuel being fired in the turbine using the total sulfur methods in 40CFR60.335(b)(10) unless the gaseous fuel combusted in the turbine is demonstrated to meet the definition of natural gas as found in 40CFR60.331(u). The demonstration shall satisfy one of the requirements found in 40CFR60.334(h)(3)(i) and (ii). As an alternative, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Associated Standard 2377-86 may be used. For these turbines, monitoring of the gaseous fuel is not required since the gaseous fuel meets the definition of pipeline quality natural gas (e.g. less than or equal to 0.5 gr/100 scf as determined by contract or annual sampling and analysis per Appendix D). Monitoring of fuel oil shall meet requirements stated in Condition 20. Nitrogen - The owner or operator shall monitor the nitrogen content of the fuel combusted in the turbine if the owner claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in 40CFR60.332). The nitrogen content of the fuel shall be determined using methods described in 40CFR60.335(b)(9) or an approved alternative.

Condition Number	Conditions
20.	The frequency of determining the sulfur, GCV, and nitrogen content of the fuel shall meet the following requirements: Sulfur (comply with either (1)(a) or (2) and (1)(b) or (2) below): 1. a. For fuel oil sulfur content and GCV, follow Part 75, Appendix D, Section 2.2.3 (weekly composite flow proportional sampling), 2.2.4.1 (daily sampling), 2.2.4.2 (sampling from the unit's storage tank after each addition of fuel to the tank), or 2.2.4.3 (sampling each delivery prior to combining it with fuel oil already in the intended storage tank). b. For gaseous fuel sulfur content and GCV, owners or operators that elect not to demonstrate sulfur content described in Condition 19 and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. These turbines will use gaseous fuel meeting the definition of pipeline quality natural gas and will not be required to sample for sulfur content. Monthly GCV will be from monthly vendor analyses. 2. Except for alternate plans already acceptable as outlined in 40CFR60.334(i)(3)(i) and (ii), custom schedules may be developed and shall be substantiated with data and shall be approved by the Bureau before they can be used to comply with the standard in 40CFR60.333. Nitrogen (comply with (1) and (2) below): 1. For fuel oil nitrogen content, if an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the fuel oil shall be determined and recorded once per unit operating day. 2. For gaseous fuel nitrogen content where an allowance for fuel bound nitrogen is claimed, the gaseous fuel nitrogen content value shall be determined and recorded once per unit operating day. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content , the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with 40CFR60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown, and malfunction. For the purpose of reports required by 40CFR60.7(c), refer to 40CFR60.334(j) in determining periods of excess emissions and monitor downtime. All reports required under 40CFR60.7(c) shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality and shall be postmarked by the 30th day following the end of each calendar quarter.
21.	Emission limits specified in Section II.A of this permit may be exceeded during periods of startup and shutdown provided that optimal operational practices are adhered to and periods of these excess emissions are minimized. Startup for dispatch purposes will normally follow an automated sequence to achieve stable operation at a load greater than 25% of rated output. However, in the event of the need for online diagnosis and maintenance of problems encountered during startup, the turbine may be held for brief periods (up to 2.5 hours) to correct the problem without the need for a shutdown and subsequent restart of the turbine. Deviations from the automated startup sequence will be recorded in the operational log with an explanation of the problem and corrective actions taken to complete the startup. Except for operating at low loads as described in Condition 8, for Oconee Nuclear Station back-up testing and maintenance, these turbines shall not be operated in a "pause mode" for electric dispatch at loads less than 25%. "Pause mode" for this permit is defined as a holding period during which a turbine is brought on line and operated at a lower level of output (less than 25%) for the purpose of managing system wide electrical load or in anticipation of a later need to escalate to full output. Startup for dispatch purposes is defined as the period from zero load (unfired) to 25% load and shutdown from dispatch is defined as 25% load to flame out. The operational logs containing any startup deviations shall be maintained for a period of five (5) years and made available to Department representatives upon request.

E. EXEMPT SOURCES

Equip ID	Exempt Source Description (Exemption Date)	Basis
a.	(2) 750 KW Blackout Protection Emergency Generators (equipped with hour meters to demonstrate < 250 hrs/yr)	SC Reg. 61-62.1 (II)(F)(2)(e)
b.	(2) 250 Gallon Fuel Oil Storage Tanks	SC Reg. 61-62.1 (II)(F)(2)(g)

Carl W. Richardson, P.E., Director
Engineering Services Division
Bureau of Air Quality

ATTACHMENT A

Exhibit A
Page 11

Modeled Emission Rates
Duke Energy Corporation (Lee Steam Station)
Permit No. 0200-0004-CC
Page 1 of 1

NAAQS EMISSION RATES							
STACK	Modeled Emission Rates (lbs/hr)						
	TSP[1]	PM_{10} Annual[1]	PM_{10} 24 Hour[2]	SO_2 Annual[1]	SO_2 3/24 Hour[2]	NO_2[1]	CO[3]
CT7 – Combustion Turbine[4]	2.447	2.447	5.1	9.816	21.9	33.44	163.4
CT8 – Combustion Turbine[4]	2.447	2.447	5.1	9.816	21.9	33.44	163.4
FACILITY TOTAL	4.894	4.894	10.2	19.632	43.8	66.88	326.8

[1]Emission rates are for burning a combination of natural gas (500 hrs/yr) and No. 2 fuel oil (3900 hrs/yr) at 100% load.
[2]Emission rates are for burning No. 2 fuel oil at 100% load.
[3]Emission rates are for burning natural gas at idle (0%) load.
[4]Modeled at Location Site A.

NAAQS EMISSION RATES (Existing Sources)						
STACK	Modeled Emission Rates (lbs/hr)					
	TSP	PM_{10}	SO_2	NO_X	CO	Lead
EP1, EP2 – Boiler 1	729	9.8	N/A	729	23.4	1.79
EP3, EP4 – Boiler 2	729	9.8	N/A	729	23.4	1.79
EP5, EP6 – Boiler 3	1351	18.2	N/A	1351	43.3	2.66
EP10 –Auxiliary Boiler	0.0121	0.0121	4.3	1.21	0.3	-

PSD CLASS II INCREMENT EMISSION RATES					
STACK	Modeled Emission Rates (lbs/hr)				
	PM_{10} Annual[1]	PM_{10} 24 Hour[2]	SO_2 Annual[1]	SO_2 3/24 Hour[2]	NO_2[1]
CT7 – Combustion Turbine[3]	2.447	5.1	9.816	21.9	33.44
CT8 – Combustion Turbine[3]	2.447	5.1	9.816	21.9	33.44
FACILITY TOTAL	4.894	10.2	19.632	43.8	66.88

[1]Emission rates are for burning a combination of natural gas (500 hrs/yr) and No. 2 fuel oil (3900 hrs/yr at 100% load.
[2]Emission rates are for burning No. 2 fuel oil at 100% load.
[3]Modeled at Location Site A.

TOXIC AIR POLLUTANTS MODELED - STANDARD 8						
STACK	Modeled Emission Rates (lbs/hr)					
	Antimony Compounds (N/A)	Arsenic (7440382)	Beryllium (7440417)	Cadmium (7440439)	Chlorine (7782505)	Chromium +6 Compounds (N/A)
EP1, EP2 – Boiler 1	2.14	0.33	0.004	0.11	59.59	0.3
EP3, EP4 – Boiler 2	2.14	0.33	0.004	0.11	59.59	0.3
EP5, EP6 – Boiler 3	3.17	0.49	0.006	0.17	88.72	0.5
FACILITY TOTAL	7.45	1.15	0.014	0.39	207.9	1.1

TOXIC AIR POLLUTANTS MODELED - STANDARD 8					
STACK	Modeled Emission Rates (lbs/hr)				
	Cobalt Compounds (N/A)	Manganese Compounds (N/A)	Mercury (7439976)	Nickel (7440020)	Selenium Compounds (N/A)
EP1, EP2 – Boiler 1	0.56	2.27	0.32	1.08	2.14
EP3, EP4 – Boiler 2	0.56	2.27	0.32	1.08	2.14
EP5, EP6 – Boiler 3	0.79	3.38	0.47	1.61	3.17
FACILITY TOTAL	1.91	7.92	1.11	3.77	7.45

September 8, 2005

Duke Energy Corporation (Lee Steam Station)
PO Box 1006, EC11E
Charlotte, NC 28201-1006

ATTENTION: William T. Horton

Dear Mr. Horton:

Your permit application has been reviewed by our technical staff. Enclosed is Construction Permit No. 0200-0004-CC. Please note the conditions on this permit by reading it carefully. Pursuant to the South Carolina Administrative Procedures Act, this construction permit may be appealed within the time limit set by the Rules of Procedure for the Administrative Law Court, which is currently thirty (30) days after the date of issue listed on the permit.

In addition to this permit to construct, a permit to operate is required in accordance with the Air Pollution Control Regulations and Standards for the State of South Carolina. The regulations require a written request to obtain an operating permit be submitted to this Department no later than fifteen (15) days prior to placing the new, increased, or altered source in operation.

Please examine this new permit carefully for errors or omissions and notify the appropriate staff member, Joe Eller, at (803) 898-3831, or by e-mail at: ellerjc@dhec.sc.gov, promptly if any are discovered.

Sincerely,

Carl W. Richardson, P.E., Director
Engineering Services Division
Bureau of Air Quality

CWR:JCE:kal

Enclosure

cc: Jeff Garrison, Region 1, Anderson EQC Office
Permit File: 0200-0004
Main File: 0200-0004